DOCUMENT RESUME

ED 417 186 SP 037 833

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TITLE Student Perceptions of Block Scheduling in a New York State Public High School.
PUB DATE 1997-10-22
NOTE 19p.; Paper presented at the Annual Meeting of the Northeastern Educational Research Association (Ellenville, NY, October 22-24, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Block Scheduling; Classroom Techniques; Educational Environment; High School Students; High Schools; Public Schools; Rural Schools; Stress Variables; *Student Attitudes; Teacher Student Relationship
IDENTIFIERS New York

ABSTRACT

This study examined rural high school students' perceptions of block scheduling. During the third year of a block scheduling program, juniors and seniors who had experienced both traditional and block schedules completed surveys that asked for their perceptions of scheduling and its effects on them before and after block scheduling. The questions examined stress from both types of scheduling, changes in teachers' instructional methods, changes in student-teacher relationships, changes in homework, changes in classroom atmosphere, changes in their attendance, and perceptions of the school in general. Students also gave their opinions about the benefits and problems of block scheduling. A total of 80 out of 162 students completed the survey. Results indicated that students saw little difference in amounts of homework. They considered the longer classes boring because there were no breaks. They saw a slight increase in class discussions and group projects in block scheduled classes. Students considered teachers responsive to their academic needs both before and after block scheduling. They reported traditionally scheduled classes were more chaotic than block scheduled classes. Block scheduling influenced students' decisions to attend school because it increased the amount of material covered each day. Students felt more stress in school after implementation of block scheduling. Overall, students supported block scheduling. They considered the opportunity for more discussion the primary benefit of block scheduling. (Contains 4 figures and 15 references.) (SM)

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Student Perceptions of Block Scheduling in a New York State Public High School

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Paper presented at the Annual Meeting
of the Northeastern Educational Research Association
October 22-24, 1997
Ellenville, New York

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Student Perception of Block Scheduling in a New York State Public High School

INTRODUCTION

The process of education depends, at least in part, on the receptivity of students. Without students who are listening, participating, understanding and learning, teaching is not very productive. Students who perceive the educational process to be pointless may not learn or develop a life-long interest in learning. On the other hand, students who are enthusiastic about being in the classroom and about how and what they are taught, will hunger to learn and to continue learning. Therefore, any method that will improve students' willingness to actively participate and provoke a healthy curiosity for life experiences will be beneficial to students and to the educational system.

Block scheduling is an emerging reform effort in New York state public schools that will provide these things, according to its proponents. However, if block scheduling is to be effective, it must be accepted by all who have an interest in the educational process – teachers, administrators, parents, the community, and students. These constituents can be viewed as being on one of two sides of the educational process: those who provide the service and those who receive it. Parents, teachers, administrators, and community are on one side of the process. Students are on the other, and not always willingly so. Block scheduling has the potential of reducing student stress while increasing achievement (Carroll, 1990) and thus could potentially be a method of reducing the adversarial relationship between the providers of education and the receivers, and contribute to *effective* education through increased

student cooperation. For that reason, this paper will explore student perception of block scheduling.

RATIONALE

In the past, our educational system has been criticized as being ineffective. A recent reform, Goals 2000, stated that all children can learn. But educators realize that not all children learn in the same way. There needs to be a flexibility within the educational system that accommodates the diversity among students while still addressing the need for the development of problem solving skills, cooperation, and skill mastery as recognized by Theodore Sizer (1988) in his model of the "essential" high school. In order to be effective, it is also important that this flexibility be accepted by the students the model is designed to serve.

Time is a limited commodity and, as such, is extremely valuable. Schools have a finite number of hours each day to fulfill their mission of educating children and preparing them for their role in society. Increasing pressure on schools to produce better prepared students by demanding higher standards has led many educators to explore ways to also increase the amount of time available to meet these standards. In the 1970s there was a push to increase the length of the school day (Oregon, 1970). Others claimed that year-round schools would provide the extra time needed to meet tougher standards (Bradford, 1992). Some, like John Carroll (1963), argued that, in addition to the *amount* of time, the way the time was *arranged* was also a factor in increasing student achievement. The issue of time management was recognized as a potential tool for educational reform by John Carroll in the early 1960s (Carroll, 1963.) He argued that a child's aptitude and ability could be maximized by flexibility within the school schedule. Building on these ideas, some schools began pairing 45 minute classes for interdisciplinary instruction (Williamson, 1993.)

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Joseph Carroll's (1990) vision went a step further. His idea of effective time management in schools was to use large blocks of time for every subject, rather than pairing subjects. He claimed that arranging the high school schedule in trimesters of classes meeting for 120 minutes a day, would provide more individualized instruction in smaller sized classes. Students would thus be less disruptive, and more likely to achieve a higher academic level, have better relationships with their teachers, and stay in school until graduation (Carroll 1990.) He called this the "Copernican Plan."

Block scheduling is currently being explored in some New York state public schools as a method of reform. Most high schools using block scheduling have adapted the Copernican Plan to fit their own particular needs. These modifications are described in detail by Canady and Rettig (1995.) For example, some schools schedule only one class per day for 30 days, leaving time within the day for extra help and student seminars. Other schools schedule six 90 minute classes on alternate days for the full year. The most popular modification in New York public schools thus far has been a 4 x 4 plan which uses four 90 minute blocks and two semesters. This modification best suits the credit requirements for high school graduation by the New York State Education Department.

Schools actually using a block schedule have reported mixed success. In Nelson, British Columbia (Reid, Hierck, & Veregin, 1994) the high school failure rate actually increased in English, history, and geography after the implementation of the block schedule. Students at this school also complained of added stress from missed classes and from the necessity to cover a large amount of material in a shorter period of time. Other studies have concentrated on student retention (Wisconsin, 1995), student achievement (Carroll, 1994), and student behavior and satisfaction (Hinman, 1992) in block scheduled schools and found statistically significant improvements in these areas. A California high school reported that block scheduling had significantly

improved the school climate and slightly improved student attendance and grade point averages (Shore, 1995). Students in a study by Reid (1995) reported that block scheduling did not have a major impact in overall academic achievement. Yet, seventy percent of students in a Maryland study had a positive attitude toward block scheduling (Guskey, 1995) and preferred it over a more traditional, 45 minute period schedule.

These conflicting reports illuminate the need for further research into the perceptions and effectiveness of block scheduling in high schools. In particular, the perceptions of students are important to the success or failure of this reform since it affects them in so many ways. For example, can students "dig deeper" into subjects in a 90 minute block of time or is their concentration lost after 45 minutes and the rest of the time in class wasted? Do students really see a change in the way they relate to teachers or are they more isolated than ever? Only by exploring student perceptions will these questions be answered and the value of student perception as a variable in the success or failure of block scheduling be uncovered.

RESEARCH QUESTIONS

This study was limited to student perception of block scheduling and included the following research questions:

1. Do students support block scheduling in their high school?

2. Is student support for block scheduling related to:
   a. number of years in the program?
   b. post-high school plans?
   c. age?
   d. gender?
   e. socioeconomic status?

3. When comparing their experiences in a traditional schedule to the new block schedule, do students perceive a significant difference in:
    a. method of instruction in their classes?
    b. student-teacher relationships?
    c. the amount of personal stress?
    d. the amount of homework?
    e. the classroom atmosphere?
    f. the high school in general?

4. Has block scheduling had an effect on student motivation to attend school regularly?

5. What benefits do students attribute to block scheduling?

6. What problems do students attribute to block scheduling?

The researchers hypothesized that students' attitudes toward block scheduling would be favorable and that this attitude would be independent of gender, socioeconomic status, age, and related to post-high school plans and number of years in the block scheduling program. Based on the literature available, it was also hypothesized that student perception of stress, of relationships with teachers, of the amount of work required, and of the high school in general would show a significant difference when their experiences in a traditional schedule were compared to their experiences in a block schedule.

BACKGROUND INFORMATION

The high school used in this study is an average, rural high school. Students' families occupations are a mix of agriculture and professionals. Data was collected during the third year of the block scheduling program. Most of the students in grades 7-10 of this high school have only experienced block scheduling and have had no exposure to shorter, "traditional" length classes . Therefore, only juniors and seniors were surveyed for this study since they would be able to compare their experiences in "traditionally" scheduled classes to the block scheduled classes.

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METHODOLOGY

All juniors and seniors in this high school were asked to fill out a 26-question survey asking for their perceptions of scheduling and its affects on them before and after block scheduling was implemented in their school. Survey questions were based on the research questions and included topics such as the amount of stress students perceived in the "traditional" schedule and in the block schedule, the amount of homework before and after block scheduling, changes in the method of instruction teachers used in their classes, changes in student-teacher relationships, changes in classroom atmosphere; changes in their own attendance, and their perception of the high school in general. Students were asked to respond on a Likert-type scale from 1 to 5, where one was a completely negative perception or attitude and five was a completely positive perception or attitude. Other survey questions asked for demographic data such as age, number of years in the program, post high school plans, gender, and participation in a free/reduced lunch program to indicate socioeconomic status. Students were also asked to give their opinions about the benefits and problems of block scheduling in their school.

The methodology and questionnaire used in this study were similar to those used in a study of parent perceptions of block scheduling in this same high school (Thomas & O'Connell, 1997) Survey questions were modified for students based on the results of that study.

Parental permission forms were taken to the school for distribution. Phone calls and a second mailing of permission forms were made to parents not responding to the first request. Students under the age of 18 with signed consent forms were given a survey to fill out during the school day. A copy of the survey was mailed to students over the age of 18 who had not yet responded and to students under the age of 18 with parent permission who had not yet filled out the questionnaire. A total of 80

surveys were completed from the junior-senior class population of 162, yielding a 49% response rate.

DATA ANALYSIS

Student perception of the method of instruction in their classes, of student-teacher relationships, of the amount of personal stress, of the classroom atmosphere, of the amount of homework, and of the high school in general were measured on a Likert-type scale from 1 to 5. The frequency, mean, and standard deviation were calculated for these variables. Mean scores of the data given on perceptions before and after block scheduling were compared through t-tests. Correlations among the continuous variables were used when appropriate. Nominal data collected included student age, number of years in the program, post high school plans, gender, and participation in a free/reduced lunch program as an indicator of socioeconomic status.

Qualitative data were collected through open-ended questions. Findings from this data are also reported in this study.

RESULTS AND DISCUSSION

HOMEWORK

Students reported little difference in the amount of homework they were assigned before block scheduling and the amount assigned in block scheduled classes. Teachers appear to have maintained their homework policies, assigning between 0 - 2 hours of homework per night in both traditionally scheduled classes prior to the implementation of block scheduling and in the current block scheduled classes. A t-test indicated no significant difference ($M(b) = 1.90$, $M(a) = 1.94$, $t = 0.31$, $p \leq .760$) in the amount of homework reported by students before and after the

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implementation of block scheduling. Although there is an increase in the amount of daily classwork required with block scheduling in order to cover necessary material, students perceived little difference in the amount of homework required. Although classwork is essentially doubled through block scheduling, homework is not.

TEACHING METHODS

Students also rated teaching methods in their classes, such as the use of group projects, the use of class discussion, responsiveness of teachers to student questions, the swiftness of teachers in recognizing student problems in understanding the presented material, the opportunities for students to cheat, and the number of field trips taken per semester.

Students reported a slight increase in the use of group projects in the block scheduled classes. A t-test indicated a significant relationship (M (b) = 2.89, M (a) = 3.92, t = 7.74, $p \leq .001$) between the use of group projects before and after the implementation of block scheduling.

Class discussions increased slightly after the implementation of block scheduling, although this was a technique used by teachers both in traditionally scheduled and in block scheduled classes, according to students. A t-test indicated no significant difference (M (b) = 3.39, M (a) = 4.0, t = 1.13, $p \leq .263$) in the amount of class discussion before and after the implementation of block scheduling.

Students complained that the longer classes were boring because teachers lectured for most of the period and refused to give them breaks. Twelve students wrote that the teachers "make or break the class." Teachers that "crammed" information or lectured for 90 minutes lost control of their classes academically as well as behaviorally according to these students.

One benefit of block scheduling is supposed to be the added opportunities for classes to take field trips without impacting other classes. The majority of students in

this survey indicated either *fewer* field trips (39.2%) or no difference in the number of field trips (36.3%) with block scheduling.

STUDENT-TEACHER RELATIONSHIPS

Students generally saw teachers as responsive to their academic difficulties both before and after the implementation of block scheduling. Responses indicated that 35% of the students perceived that teachers picked up quickly on student difficulties before block scheduling, while 71.3% of students indicated that teachers were better able to quickly discern student difficulty after the implementation of block scheduling. A t-test indicated a significant difference (M (b) = 3.18, M (a) = 3.84, t = 5.17, $p \leq .001$) in the responsiveness of teachers to student difficulties. Students perceived teachers as recognizing their difficulties with the subject much more quickly within block scheduled classes than within traditionally scheduled classes.

When asked if they received the grade they deserved, students responded positively for block scheduling. A t-test comparing the mean score of students' perception of receiving a fair grade before block scheduling with students' perception of receiving a fair grade after the implementation of block scheduling indicated a significant difference (M (b) = 3.6, M (a) = 3.98, t = 3.20, $p \leq .01$) between these two perceptions. More students felt they received the grade they deserved in block scheduled classes than they had in traditionally scheduled classes.

CLASSROOM CLIMATE

Students reported that classes before the block scheduling were more chaotic than block scheduled classes. Twenty-five percent of the students rated their classes under the block scheduling program as orderly, while only 3.8 % rated traditionally scheduled classes as orderly. Conversely, 12.5% of students rated traditionally scheduled classes as chaotic, while only 2.5% of students considered their block

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scheduled classes in that way. A t-test showed a significant difference (M(b) = 2.66, M(a) = 3.78, t = 5.67, p≤ .001) in the classroom climate before and after the implementation of block scheduling as perceived by the students in this study. One explanation for this might be the increased need for organization on the part of the teachers to cover the required material in only one semester.

Students perceived fewer opportunities to cheat after the implementation of block scheduling. One student indicated that this was because much of the work in class is done as part of a group project rather than individually, thus eliminating the need to cheat. More opportunities to cheat were reported by 20.1% of students while 23.9% reported fewer opportunities to cheat after block scheduling was implemented. The remaining 56% saw no difference in the opportunities for cheating under either type of scheduling. A t-test indicated a significant difference (M (b) = 3.33, M (a) = 3.08, t = -2.00, p≤ .05) in the opportunities students felt they had to cheat before block scheduling and the opportunities they found after block scheduling was implemented.

ATTENDANCE

A major effect of block scheduling on students in this study was the way block scheduling influenced their decision to come to school on a regular basis. Before block scheduling was implemented, only 21.3% of the students reported that they considered the amount of work they would miss by being absent. Because block scheduling increases the amount of material covered per day, 70.1% of the students said the amount of work missed would influence their decision to come to school (See Figure 1 and Figure 2.) A t-test showed a significant difference (M (b) = 2.54, M (a) = 4.06, t = 8.48, p≤ .001) between the influence that missed work during absences had on students' decisions to come to school before and after the implementation of block scheduling.

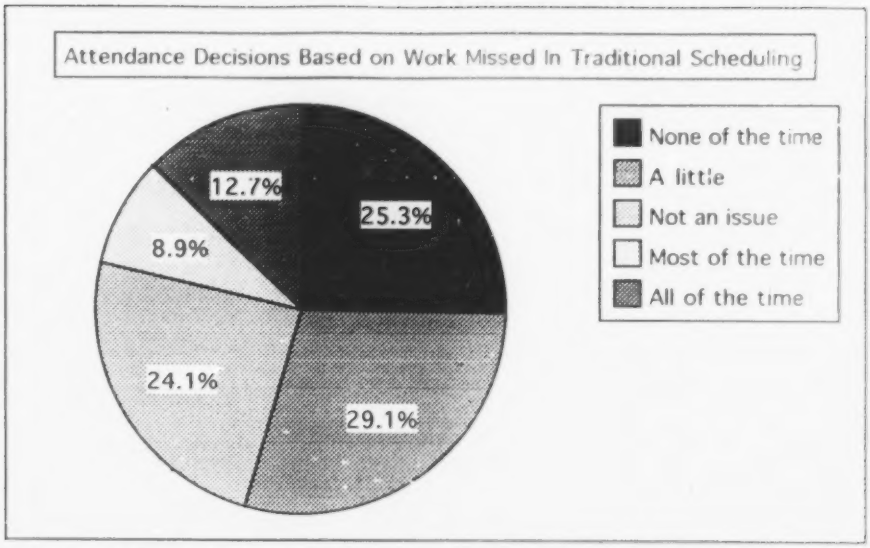

Figure 1: The Traditional Schedule. How often students base their decision to come or not come to school on the fact that they would miss too much work

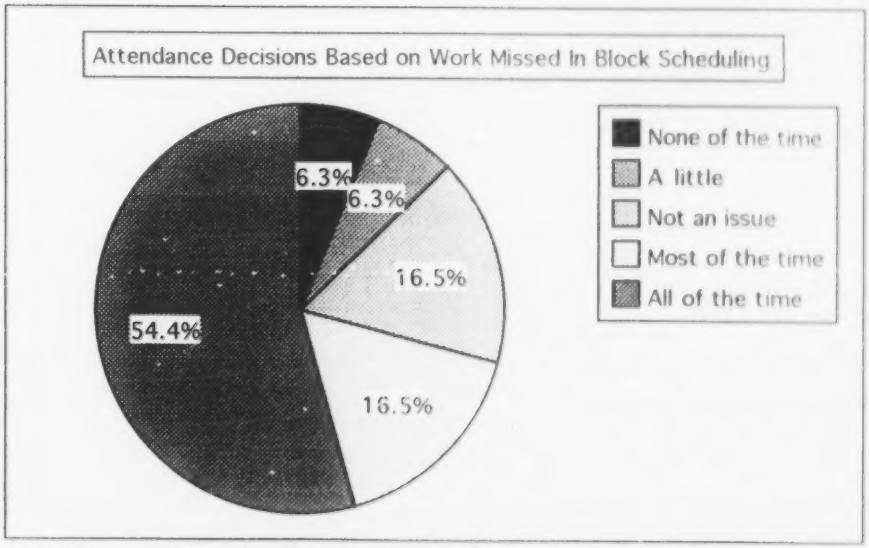

Figure 2: The Block Schedule. How often students base their decision to come or not come to school on the fact that they would miss too much work

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Students indicated that they felt more stress in school after the implementation of block scheduling, with 33.7% reporting that they felt stressed "all the time." Only 1.3% of the students felt stressed "all the time" before block scheduling. Less than half (41.3%) of the students perceived no change in the amount of stress felt at school following the implementation of block scheduling. A t-test indicated a significant difference ($M(b) = 3.49$, $M(a) = 3.78$, $t = 2.02$, $p \leq .05$) in the amount of stress students perceived before and after the implementation of block scheduling. This increased level of stress with block scheduled classes was explained by students as stemming from the necessity to cover a large amount of materials in only one semester, a gap between sequences, crowded classes, the lack of time for review before exams, and courses not always being available when needed.

When asked to rate how often they found their minds wandering during class, students indicated that their minds wandered much more *after* the implementation of block scheduling (See Figure 3). A t-test ($M(b) = 3.05$, $M(a) = 3.89$, $t = 4.92$, $p \leq .001$) indicated a significant difference in the self-reported concentration of students in class before and after the implementation of block scheduling. Ten students commented on their surveys that 90 minutes was too long to concentrate on one subject, especially when teachers lectured the whole time. The lack of breaks during the 90 minute classes was also mentioned by five students and could have contributed to the decreased concentration of students during classtime.

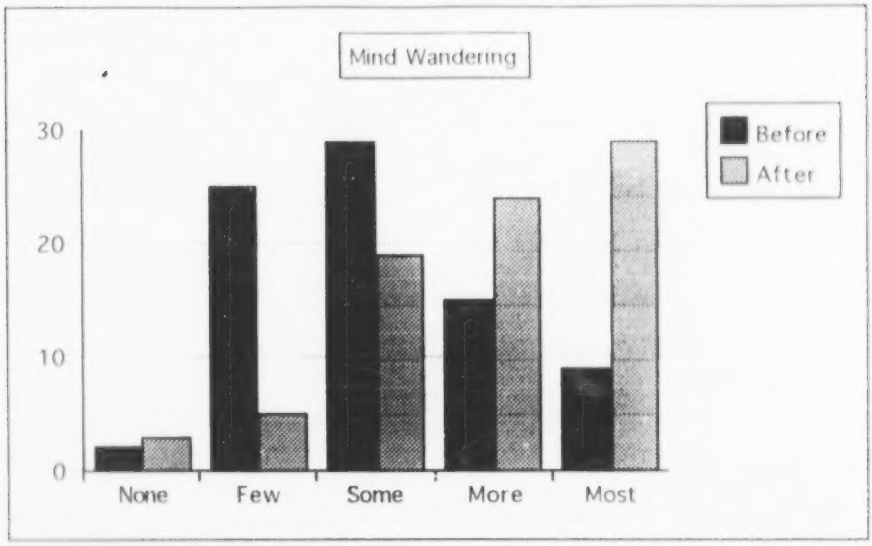

Figure 3: Amount students' minds wandered during class

VIEW OF THE HIGH SCHOOL IN GENERAL

In general, students at this high school supported block scheduling. Overall , 58.8% students reported that block scheduling had changed a great deal and 18.8% said that their school was now completely different. Only 1.3% of the students thought that the school had not changed at all. Block scheduling was rated as "excellent" by 25% of the students. Only 6.3% of the students rated the traditional schedule as "excellent." While 6.3% of the students rated their traditional schedule as "poor," only 3.8% of the students rated block scheduling as "poor" (See Figure 4.) No statistically significant correlations were found between student opinion of block scheduling and demographic factors, such as socioeconomic status, gender, age, number of years in the program, or post-high school plans.

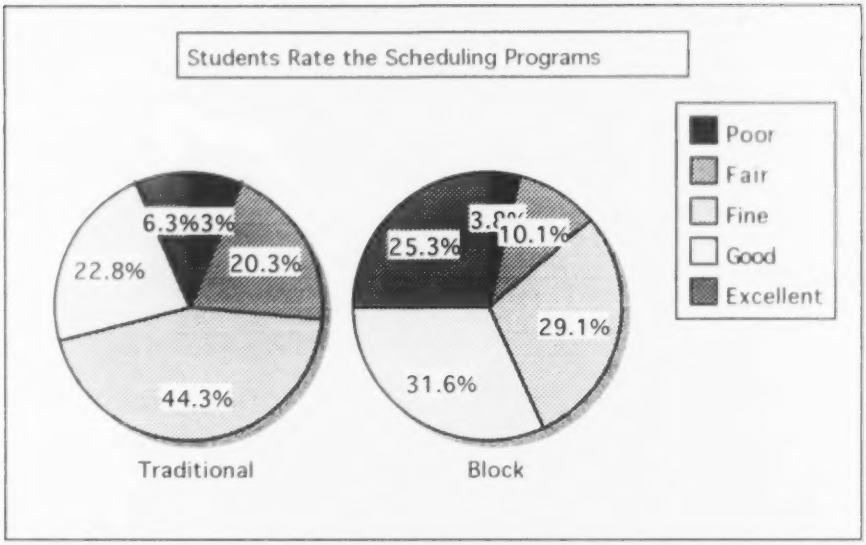

Figure 4: Students ratings of traditional and block scheduling

BENEFITS

Students viewed the increased opportunity for class discussion to be the primary benefit of block scheduling. Eighty-four percent of the students responding to the survey included this as an advantage of block scheduling. A majority of students (57%) felt that they learned more in each class, although some commented that this was due to the amount of material covered, not the quality or method of teaching. Slightly more than half (52%) of the students also enjoyed being able to complete courses in one semester rather than prolonging them for an entire year. The opportunity to spend more time with teachers was perceived as a benefit for 54% of the students in this study. Slightly less than half (49%) of the students claimed they did better academically with fewer courses in larger blocks of time than they did in more traditionally scheduled classes.

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PROBLEMS

Most students listed no problems with block scheduling; the highest percentage of students indicating *any* problem with block scheduling was 39%. These students indicated that they had more homework with block scheduling and were not happy about that aspect of the program. Other problems indicated were the lack of free time (36%) and boring classes (34%) due to the changes in structure necessary for block scheduling.

LIMITATIONS

Because of the low response rate (49%) the responses may not be entirely representative of the student population under study. Also, since this study was limited to one high school, results should not be generalized to all high schools. Schools similar in demographics and student composition may find equivalent results when implementing block scheduling. It has not yet been determined whether schools of different sizes, economic status, or in various geographic locations will have similar experiences with block scheduling.

FOR FURTHER STUDY

Other areas mentioned by students in the descriptive portion of this survey that deserve further study are the lack of coordination between AP courses and AP exams, the gap between the timing of sequences within the block schedule and the Regents exams, and scheduling BOCES classes concurrently with academic subjects. Students complained that AP and Regents exams are given long after courses are finished and they are unable to retain enough of the material to do well on the exams. Other students commented that going to BOCES classes after attending two 90 minute classes made the day too long. These issues need to be explored through further study of block scheduling.

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